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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,357	02/23/2004	Robert N.K. Browning	100110189-24	8933

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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Fort Collins, CO 80527-2400

EXAMINER


STEPHENS, JUANITA DIONNE

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/784,357	Applicant(s) BROWNING ET AL.	
	Examiner Juanita D. Stephens	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Preliminary Amendment filed 2/23/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 64-91 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 64-91 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

Specification

2. The disclosure is objected to because of the following informalities:

This specification lacks the necessary reference to the prior application. A statement reading "This is a continuation of Application No. 10/342,736, filed January 15, 2003, which is a continuation of Application No. 09/967,567, filed September 28, 2001, now US Patent No. 6,604,814." should be entered following the title of the invention or as the first sentence of the specification.

Appropriate correction is required.

Allowable Subject Matter

3. Claims 64-91 will be allowed after corrections as identified in the "Specification Section" are made.

4. The following is a statement of reasons for the indication of allowable subject matter:

The combination of a contact array disposed on at least a portion of said vertical wall including a first columnar array, a second columnar array of contact areas adjacent to the first columnar array, a third columnar array of contact areas adjacent to the second columnar array, a fourth columnar array of contact areas adjacent to the third columnar array, a fifth columnar array of contact areas adjacent to the fourth columnar array, and a sixth columnar array of contact areas adjacent to the fifth columnar array, wherein four contact areas in the first columnar array are each coupled to a different one of the plurality of groups of drop generators, wherein four contact areas in the second columnar array are each coupled to a different one of the plurality of groups of drop generators, wherein three contact areas in the second columnar array are each coupled to a different address line of the plurality of address lines, wherein one contact area in the third columnar array is coupled to one group of the plurality of drop generators, wherein two contact areas in the third columnar array are each coupled to a different address line of the plurality of address lines, wherein three contact areas of the fourth columnar array are each coupled to a different one of the plurality of groups of drop generators, wherein three contact areas in the fourth columnar array are each coupled to a different address line of the plurality of address lines, wherein four contact areas in the fifth columnar array are each coupled to a different one of the plurality of groups of drop generators, wherein two contact areas in the fifth columnar array are each coupled to a different address line of the plurality of address lines, wherein three contact areas in the sixth columnar array are each coupled to a different address line of the plurality of address lines, recited in claim 64. This invention solves the problem of

providing reliable electrical interface between a print cartridge and the printer in which it is installed.

The combination of a contact array disposed on at least a portion of said vertical wall including a first columnar array, a second columnar array of contact areas adjacent to the first columnar array, a third columnar array of contact areas adjacent to the second columnar array, a fourth columnar array of contact areas adjacent to the third columnar array, a fifth columnar array of contact areas adjacent to the fourth columnar array, and a sixth columnar array of contact areas adjacent to the fifth columnar array, wherein two contact areas in the first columnar array are each coupled to a different one of the plurality of groups of drop generators, wherein two contact areas in the first columnar array are not coupled to any of the plurality of groups of drop generators, wherein four contact areas in the second columnar array are each coupled to a different one of the plurality of groups of drop generators, wherein three contact areas in the second columnar array are each coupled to a different address line of the plurality of address lines, wherein one contact area in the third columnar array is not coupled to any of the plurality of groups of drop generators, wherein two contact areas in the third columnar array are each coupled to a different address line of the plurality of address lines, wherein two contact areas of the fourth columnar array are each coupled to a different one of the plurality of groups of drop generators, wherein one contact areas in the fourth columnar array is not coupled to any of the plurality of groups of drop generators, wherein three contact areas in the fourth columnar array are each coupled to a different address line of the plurality of address lines, wherein four contact areas in

the fifth columnar array are each coupled to a different one of the plurality of groups of drop generators, wherein two contact areas in the fifth columnar array are each coupled to a different address line of the plurality of address lines, wherein three contact areas in the sixth columnar array are each coupled to a different address line of the plurality of address lines, recited in claim 78. This invention solves the problem of providing reliable electrical interface between a print cartridge and the printer in which it is installed.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nobel et al. (US 5,953,028) discloses a print cartridge (Fig. 3) having a cartridge body having a lower portion and a vertical wall, a printhead attached to said lower portion, the printhead including a plurality of groups of drop generators and a plurality of address lines, and a plurality of contact array disposed on at least a portion of said vertical wall including a first columnar array and a second columnar array of contact areas adjacent to the first columnar array, **but does not disclose** a third columnar array of contact areas adjacent to the second columnar array, a fourth columnar array of contact areas adjacent to the third columnar array, a fifth columnar array of contact areas adjacent to the fourth columnar array, and a sixth columnar array of contact areas adjacent to the fifth columnar array.

Wilson et al. (US 6,003,974) discloses a print cartridge (Figs. 1B and 7) having a cartridge body having a lower portion and a vertical wall, a printhead attached to said lower portion, the printhead including a plurality of groups of drop generators and a

plurality of address lines, and a plurality of contact array disposed on at least a portion of said vertical wall including a first columnar array and a second columnar array of contact areas adjacent to the first columnar array, **but does not disclose** a third columnar array of contact areas adjacent to the second columnar array, a fourth columnar array of contact areas adjacent to the third columnar array, a fifth columnar array of contact areas adjacent to the fourth columnar array, and a sixth columnar array of contact areas adjacent to the fifth columnar array.

Murthy et al. (US 6,024,440) discloses a print cartridge (Figs. 1 and 2) having a cartridge body having a lower portion and a vertical wall, a printhead attached to said lower portion, the printhead including a plurality of groups of drop generators and a plurality of address lines, and a plurality of contact array disposed on at least a portion of said vertical wall including a first columnar array and a second columnar array of contact areas adjacent to the first columnar array, **but does not disclose** a third columnar array of contact areas adjacent to the second columnar array, a fourth columnar array of contact areas adjacent to the third columnar array, a fifth columnar array of contact areas adjacent to the fourth columnar array, and a sixth columnar array of contact areas adjacent to the fifth columnar array.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juanita D. Stephens whose telephone number is (571) 272-2153. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Juanita D. Stephens
Primary Examiner
Art Unit 2853

October 31, 2004